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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/727,242

12/03/2003

Nigel V. Spurr

H0005873

4894

7590

04/05/2007

Kris T. Fredrick  
Honeywell International, Inc.  
101 Columbia Rd.  
P.O. Box 2245  
Morristown, NJ 07962

EXAMINER

LEE, EDMUND H

ART UNIT

PAPER NUMBER

1732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/727,242

Applicant(s)

SPURR ET AL.

Examiner

EDMUND H. LEE

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-11 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-11 and 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman (USPN 5236234) in view of Mehta (USPN 5319522). In regard to claim 1, Norman teaches the basic claimed process including a molding method (col 5, lns 7-44, and figs 1-2 and 8); providing a mold having a mold cavity formed therein (col 5, lns 7-44, and figs 1-2 and 8); locating an electrical circuit within the mold cavity, wherein the circuit comprises electrical components assembled to an electrical circuit board prior to any molding operations thereof (col 5, lns 7-44, and figs 1-2 and 8); and molding a plastic material into the mold cavity of the mold, wherein the material covers and seals the circuit to provide insulation and environmental protection to the circuit (col 5, lns 7-44, and figs 1-2 and 8). Norman, however, does not teach injecting the material into the mold cavity. Mehta teaches an injection molding method for encapsulating an electrical circuit (figs 5-6). Furthermore, Norman also teaches configuring the mold to provide a mold form geometry that permits a plurality of components to be connected electrically to the circuit and an associated latch mechanism after the injection molding of the plastic material into the cavity; and configuring the mold form geometry to comprise at

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least one gap in which an additional component can be located (col 5, Ins 7-44, and figs 1-2 and 8). Furthermore, it should be noted that injection molding a molding material to encapsulate an electrical circuit is notoriously well-known in the encapsulation art. See class 264, subclass 272.17. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to inject the material of Norman as taught by Mehta in order to facilitate the encapsulation of an electrical circuit. In regard to claims 2, 5 and 7-9, such limitations are taught Norman (col 5, Ins 7-44, and figs 1-2 and 8). In regard to claim 6, the specific design of pivot feature in the molding is a mere obvious matter of choice dependent on the desired final product and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, the claimed design of a pivot is well-known in the latch mechanism art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a pivot feature into the mold design of Norman in order to allow the molding of a diverse product.

3. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman (USPN 5236234) in view of Mehta (USPN 5319522) as set forth in the Office action mailed 10/10/06.

4. Claims 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman (USPN 5236234) in view of Mehta (USPN 5319522) as set forth in the Office action mailed 10/10/06.

5. Applicant's arguments filed 1/7/07 have been fully considered but they are not persuasive. Applicant argues that Norman and Mehta cannot be combined because

their teachings are diverging. This argument is misplaced because both patents are related to the art of encapsulating electrical circuits. Also, both references involve overmolding a molding compound over the components in order to form an encapsulated article. Since Norman teaches providing molding 16, which has pressing/electrical component 110 therein, by molding, and Mehta teaches injection molding to form a molding, which has an electrical component therein, it would have been obvious to one of ordinary skill in the art at the time the invention was made to produce molding 16 of Norman by the injection molding encapsulating method Mehta in order to reduce cycle time. Applicant also argues that Norman does not teach a mold having the claimed mold geometry. This argument is misplaced because it is clear from Norman at col 5, lns 7-44 that molding 16 was shaped as appropriate for mating electrical connections.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 2002-347065 teaches encapsulating an electrical circuit by injection molding.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571.272.1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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EDMUND H. LEE  
Primary Examiner  
Art Unit 1732

EHL

A handwritten signature in cursive script, appearing to read "Edmund H. Lee".

4/21/16